REMARKS

Claims 1-35 are pending from the last office action. Claims 1-26 stand elected. Claims 27-35 have been canceled as directed to non-elected inventions. Claims 36-47 have been added by amendment above.

Claims 1-26 stand rejected on prior art grounds. Claims 1-6, 8-16, 21 and 23 stand rejected under 35 U.S.C. § 102(a) as anticipated by *Leopold*; claims 7 and 17 stand rejected under 35 U.S.C. § 103(a) as obvious over a suggested combination of *Leopold* and *Smith*; claims 18-20, 22, 23, and 25 stand rejected under 35 U.S.C. § 103(a) as obvious over a suggested combination of *Leopold* and *Pacetti*; and claims 24 and 26 stand rejected under 35 U.S.C. § 103(a) as obvious over a suggested combination of *Leopold* and *Da Silva*. These prior art rejections are similar to those of the June 12, 2007 official action, except that now the examiner applies *Leopold* in a different manner. Therefore, the present official action has been made non-final.

As an initial matter, applicant would like to thank the examiner for discussing this case and the prior art during the February 20, 2008 telephonic interview.[1] As the applicant representatives explained, the present application describes techniques and devices quite different from those of *Leopold*. Notably, *Leopold* is a conventional stent device having of a single wire that forms each of the "longitudinal sections 14" and "arcuate sections 12" constituting the stent. To assemble, in a preferred embodiment, *Leopold* winds his wire about a series of pegs 34 extending from a shaft or mandrel 32, where the spacing between pegs defines the stent shape and operation. See, e.g., Figure 8 of *Leopold*.

As applicant's representative noted, in contrast to *Leopold*, the present application shows various examples of structures that may be batch fabricated using planar manufacturing techniques, such as lithography. Stents may be formed of longitudinally-extending side beams and transversely-extending cross beams, all combined to form a unitary structure. In a non-expanded position, the structures are planar, but when expanded these structures are formed into 3-D stents that may be deployed in a body lumen or vessel.

[1] Beyond the summary provided herein, no other exhibits, illustrations, other prior art, other prior art rejections, or any other pertinent matters, as set forth in MPEP 713.04, were discussed during the telephonic interview. No agreement was reached on the outstanding prior art rejections. Pursuant to MPEP 713.04, applicant respectfully requests the examiner to check the accuracy of this interview summary and respond to the same, if unacceptable.

Figures 1a – 1c show an example stent in various stages of deployment, starting from the non-expanded position of Figure 1a and ending in a fully expanded position in Figure 1c. Figures 2, 3, and 4 show other example stent devices. From any of these examples, it is clear that *Leopold* is directed to a quite different configuration.

Turning now to the claims, applicant respectfully traverses the rejection of independent claim 1. Claim 1 recites:

> 1. A planar structure expandable into a 3-D structure, the planar structure comprising: first and second spaced side beams which extend continuously along a longitudinal axis; and a plurality of spaced cross-bands which connect the side beams together wherein a first set of the cross-bands are expandable in a first direction substantially perpendicular to the longitudinal axis to form a 3-D structure.

Leopold simply does not teach such subject matter. Applicant questions whether *Leopold* can be fairly characterized as having a planar structure in any way. Yet, even with the "essentially flat" configuration of Figure 3, *Leopold* does not show side beams (the beams 14 in this configuration are not to the side) nor cross-bands connecting side beams together. That is, the office action has not established that *Leopold* teaches a planar structure having the recited elements. Further still, however, *Leopold* does not teach, in any position, side beams that extend continuously along the length of a planar structure.

In contrast to *Leopold*, the present application describes planar structures having side beams (see, merely for example 14, 24, or 44) that extend continuously along the device when in the planar, or non-expanded, position. The side beams 24, for example, extend across each of the cross-bands 26 and ultimately form part of the stent device in the 3-D, or expanded, position. See, e.g., FIG. 1c. Such side beams may provide the advantage of longitudinal compliance and structural rigidity, and thereby allow the cross-bands to unfold properly during deployment. And *Leopold* clearly does not teach such subject matter. Actually, *Leopold* would never teach or suggest such subject matter, because *Leopold* seeks to use a single wire frame to form its structure, thereby making it implausible to use continuous side beams in place of the discrete, non-continuous elements 14.

In any event, for at least the foregoing reason, the rejection of claim 1 is traversed. Claim 1 and claims 2-26 depending therefrom are in condition for allowance.

Applicant has added independent claim 36 which recites:

> 36. (New) A stent having a planar structure in a non-expanded position and expandable into a 3-D structure in an expanded position, the stent comprising:
>
> first and second spaced side beams which extend along a longitudinal axis of the stent in the non-expanded position;
>
> a first set of cross-bands that connect the side beams together and that are expandable in a first direction substantially perpendicular to the longitudinal axis, where each cross-band in the first set includes a plurality of interconnected and folded back first and second beam sections disposed in a plane of the stent when the stent is in the non-expanded position; and
>
> a second set of cross-bands that connect the side beams together and are expandable in a second direction substantially opposite the first-direction to form the 3-D structure along with the first set of cross-bands, where each of the cross-bands in the second set includes a plurality of interconnected and folded back first and second beam sections disposed in the plane of the stent when the stent is in the non-expanded position.

Looking to *Leopold*, it is clear that the recited subject matter is not taught in that document. Figures 1-3 and 10 of *Leopold* show arcuate sections 12 that extend between the discrete beams 14. But none of these arcuate sections are formed of one (much less a plurality of) interconnected and folded back first and second beam sections disposed in a plane of the stent when the stent is in a non-deployed position. At most, *Leopold* teaches that each arcuate section is formed of a top half portion 62 and a bottom half portion 64 that are both joined at a bend. See, e.g., Figure 10. Contrastingly, the present application describes numerous example stents in which the cross beams are formed of beam sections, where beams are folded back onto each other by a hinge. Examples include the involute beams of Figure 2 and the switchback beams of Figure 4. These types of cross-bands may offer the advantage of planar batch fabrication and stress-relief during stent expansion, as shown in Figure 14. In fact, such cross-band patterns allow the structure to accommodate large deformations during deployment so that the maximum tensile stress may be less than the

ultimate stress of the beam. See, e.g., the paragraph bridging pages 12 and 13 of the instant application.

In any event, nowhere does *Leopold* or the other art of record teach or suggest the subject matter of independent claim 36 or that of claims 37-45 depending therefrom. In fact, many of the dependent claims not only distinguish over the prior art by implication, they also recite additional features clearly absent from the prior art.

Independent claim 46 has been added by amendment above and recites:

> 46. (New) A stent for use with a balloon catheter and comprising:
>
> a unitary stent structure disposed in a plane when in a non-expanded position and having a longitudinal axis;
>
> the stent structure including first and second parallel spaced apart side beams extending parallel to the longitudinal axis;
>
> a plurality of cross-bands extending across the stent structure and interconnecting the side beams;
>
> each of the cross-bands including a plurality of interconnected and folded back beam sections;
>
> each of the cross-bands arranged to deflect away from the plane of the stent to an expanded position in response to application of an expansion force from the balloon catheter;
>
> a first set of the cross-beams arranged to deflect away from the plane of the stent in a first direction; and
>
> a second set of the cross-beams arranged to deflect away from the plane of the stent in a second direction opposite the first direction.

Thus for similar reasons to those outlined above, claim 46 and dependent claim 47 are in condition for allowance.

In view of the above amendment, applicant believes the pending application (claims 1-26 and 36-47) is in condition for immediate allowance.

Additionally, pursuant to MPEP §2001.06(b), applicant directs the examiner's attention to co-pending U.S. Application Serial No. 10/939,684, which has a common inventor to the present application. The '684 application was filed after the present application, but the application may be deemed by the examiner as directed to similar subject matter to the present application.

Along those lines, any art cited in the prosecution of the '684 application and that is not of record in the present application is being cited separately via an information disclosure statement.

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Respectfully submitted,

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